

STUDIES IN AMERICAN SPIDERS, THE GENUS WUBANA

BY SHERMAN C. BISHOP AND C. R. CROSBY

WUBANA Chamberlin

Ent. Soc. Am. Ann. 12: 252. 1919.

Type, *Bolyphantes drassoides* Emerton

KEY TO SPECIES, MALES

- Paracymbium armed on the side toward the cymbium with a large tooth. *drassoides* Em.
 Paracymbium without this tooth.....*pacifica* Banks.

Wubana drassoides Emerton

Bolyphantes drassoides Emerton, Conn. Acad. Sci. Trans. 6: 72, pl. 23, f. 5. 1882.

Nematogmus drassoides Banks, U. S. Nat. Mus. Bul. 72: 28. 1910.

Sphecozone drassoides Petrunkevitch, Cat. Am. Spid. p. 270. 1911.

Wubana drassoides Chamberlin, Ent. Soc. Am. Ann. 12: 252. 1919.

Wubana retrahens Chamberlin, same, p. 253, pl. 18, f. 10. 1919.

Male. Length, 2 mm. Cephalothorax orange yellow, very narrowly edged with gray, viewed from above rather broad, evenly rounded on the sides on the hinder half; on the front half the sides are nearly straight and converged, nearly straight across the front with the angles rounded. Cephalothorax viewed from the side steeply ascending in a straight line behind, then nearly level to the base of the horn which slants forward, blunt at tip and concave in front. Back of horn clothed with stiff hairs, curved forward and increasingly stouter towards the tip, the terminal one a very stout spine. Clypeus concave immediately below the eyes and then gently convex. Sternum broad, pale yellow, sometimes distinctly and narrowly margined with blackish. Endites pale yellow. Legs long and slender, pale yellow. Abdomen pale grayish with a medium stripe in front and three or four narrow cross bands on the hinder half, dark gray, spinnerets surrounded with dark gray except below. Sometimes the abdomen is all pale except for a light gray stripe in the middle in front and faint indications of the cross bars. In specimens from California the dark markings on the abdomen are much more distinct; in one from Berkeley the abdomen is almost entirely black. Venter with two grayish stripes, darker and broader in front.

Posterior eyes in a gently recurved line, the median separated by the diameter and from the lateral by the radius. Anterior eyes in a straight line, the median almost as large as the lateral, nearly equidistant, separated by less than the radius.

Femur of palpus nearly straight, patella short. Tibia with a deep, smoothly rounded excavation on the lateral side and produced into a long, broad, process that extends spirally along the side of the base of the cymbium. This process is narrower than in *pacifica*. The paracymbium is rather narrowly articulated to the cymbium; at the point of attachment the surface is elevated to form a small tooth; the anterior margin is sinuate and armed at the ventral angle with a stout curved tooth; posteriorly the paracymbium is produced into a long, slender process that extends almost to the base of the tibia; the posterior margin near the tip of the tibial process is also armed with a rather long, gently curved, black tooth. The long style-like embolus arises from a bulb-like base and loops proximally nearly to the base of the cymbium; it then turns distally and the tip lies near the apex of the bulb. Throughout more than half its length the embolus is protected by a membranous sheath.

Female. Length, 2.5 mm. Similar to the male, the head without the horn, armed with a median row of stiff hairs slanting forward. The dark markings on the abdomen distinct as in the more strongly marked eastern males.

Posterior eyes in a straight line, the median separated by a little less than the diameter and from the lateral by about the radius. Anterior eyes in a straight line, the median smaller than the lateral, separated by the diameter and a little nearer to the lateral.

Epigynum distinctly protuberant, the posterior margin evenly rounded, the middle lobe triangular and lying at the same level as the lateral lobes.

Type localities: Holotype ♂, Mt. Carmel, Hamden, Conn. Allotype ♀, Cabin John, Md.

District of Columbia: Washington, Nov. 1 ♂ (Fox); July 1, 1912. 1 ♂.

Maryland: Cabin John, Dec. 3, 1918, 1 ♀ (the allotype).

North Carolina: Minehole Gap, Oct. 17, 1923. 1 ♂; top of Blue Ridge, Towns and Rabun County Line, Oct. 18, 1926, 1 ♂.

California: Ingleside, San Francisco, Dec. 20, 1919, 1 ♂ (Dietrich); Berkeley, Jan., 1920, 1 ♂ (Dietrich), Dec., 1919, 1 ♂ (Dietrich).

Utah: Chalk Creek, 1917, 1 ♂ (Chamberlin); Filmore, 1 ♂ (type of *retrahens* Chamberlin).

Chamberlin also records this species from Utah: Uintah Mts., 7,500 ft.

The record of this species in Cornell Univ. Agr. Exp. Mem. 101:1052. 1928, is an error. The specimen is *W. pacifica*.

The type of *W. retrahens* is a ♂ lacking one molt. The right

palpus has been opened and the organ released. We compared it with specimens of *drassoides* and they seem to be identical. Chamberlin's figure of the palpus is drawn from the one unmolted. The black spine that seems to arise from the tibial process is the shorter tooth of the paracymbium.

Wubana pacifica Banks

Bolyphantes pacificus Banks, Am. Ent. Soc. Trans. 23: 69. 1896.

Nematogmus pacificus Banks. U. S. Nat. Mus. Bul. 72: 28. 1910.

Wubana pacifica Chamberlin. Ent. Soc. Am. Ann. 12: 252. 1919.

Male. Length 2.4 mm. Cephalothorax brownish with radiating lines, the head back to the cervical groove and the clypeus lighter; viewed from above evenly rounded on the sides, the eyes in profile, viewed from the side evenly rounded over the back to the base of the horn which is nearly vertical in front. The head is armed back of the eyes with a horn, triangular in outline when viewed from the side. On the back of the horn there is a double row of stiff hairs curved forward. On the type there was apparently a much stronger terminal spine similar to the one in *drassoides*, which had been broken off. Mr. Banks has an unpublished drawing of the type which shows this spine. A stiff hair above each anterior median eye, a pair on the clypeus just below the median eyes, one on each side between the posterior median and the lateral eyes, and one just above the posterior end of each posterior lateral eye. Posterior eyes in a gently recurved line, the median a little nearer to the lateral than to each other. Anterior eyes in a slightly procurved line, the lateral much larger than the median, the median a little nearer to each other than to the lateral. Sternum and endites yellowish, labium darker. Abdomen gray with a large pale spot near the tip. Venter gray with longitudinal sublateral light lines. Legs brownish yellow.

The palpus is similar to that of *drassoides*. The tibial process is broader. The most striking differences are to be seen in the structure of the paracymbium; the form of the tooth at the point of attachment is somewhat different, the posterior process is much broader and the black tooth between this process and the edge of the cymbium is lacking. The embolic division is almost the same as in *drassoides*.

Female. Length, 3 mm. Cephalothorax brownish yellow, viewed from the side the outline gradually rises to a point back of the eyes and then curves downward to the anterior median eyes. The clypeus is nearly vertical, slightly concave above and convex below. Posterior eyes in a straight line, nearly equidistant. Anterior eyes in a very slightly procurved line, the median smaller than the lateral and much nearer each other than to the lateral. Sternum and endites yellowish, labium darker. Legs and palpi brownish yellow.

Abdomen high in front and somewhat pointed behind, gray above and below. A broad median stripe on the underside lighter, bounded on each

side by a narrow longitudinal light line. Epigynum consists of two broad thickened lobes at the base of which there is another pair of thinner smaller lobes.

Type locality: Olympia, Wash.

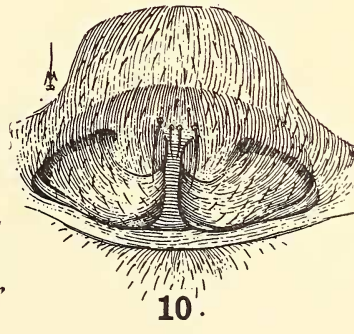
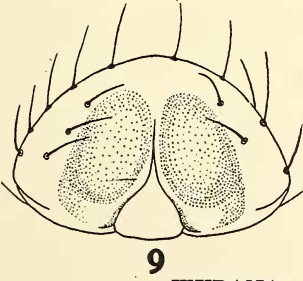
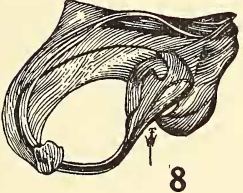
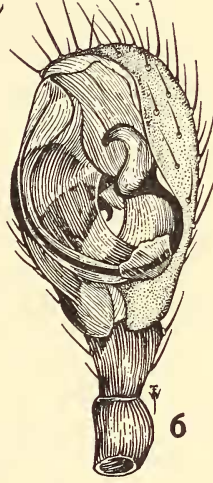
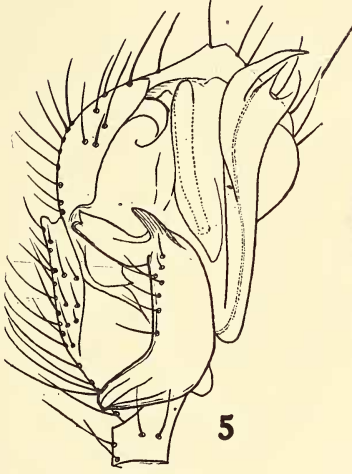
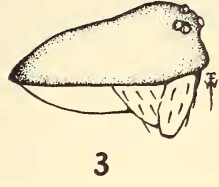
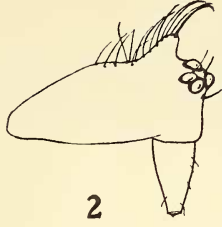
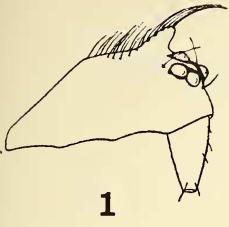
Washington: Olympia, 1 ♂, 1 ♀, the types.

New York: Mt. Whiteface, Aug. 1916, 1 ♂.

PLATE XIV

1. *Wubana drassoides* ♂, cephalothorax from the side.
2. *Wubana pacifica* ♂, cephalothorax from the side.
3. *Wubana pacifica* ♀, cephalothorax from the side.
4. *Wubana drassoides* ♂, right palpus, lateral view.
5. *Wubana pacifica* ♂, right palpus, lateral view.
6. *Wubana pacifica* ♂, right palpus, ventral view.
7. *Wubana pacifica* ♂, right palpus, dorsal view.
8. *Wubana drassoides* ♂, embolic division of right palpus.
9. *Wubana drassoides* ♀, epigynum.
10. *Wubana pacifica* ♀, epigynum.

The preparation of the drawings by Helen M. Zorsch and Albert W. Force, was made possible by a grant from the Heckscher Research Foundation at Cornell University.



WUBANA